environmental health

Missouri Department of Health and Senior Services
Onsite Sewage Program

ONSITE SEWAGE SYSTEM INSPECTIONS VERSUS EVALUATIONS

Onsite sewage systems treat wastewater from about 25 percent of the homes in Missouri. Wastewater is treated and recycled usually on the property where it is produced by onsite systems rather than by a central sewer collection and treatment system. At the time of a property sale, a homebuyer or lender may want to know about the condition of an onsite sewer system. If a system has an improper discharge or the absorption system fails, untreated or under-treated wastewater might be exposed on the ground surface. Surfacing wastewater or a contaminated water supply could be a health hazard, for the home's occupants or neighbors, and if repairs are needed for a failed or inadequate system, they can be costly.

Two types of onsite systems are commonly used to treat residential wastewater in Missouri. They are lagoons and sewage tanks with soil absorption systems.

Lagoons are above ground pond-like structures that are used to treat sewage from a single-family residence. Any overflow from a lagoon must soak into the soil, staying on the property where the lagoon is located. Air, sunlight and long retention time aid in this method of wastewater treatment.

Soil absorption systems follow primary wastewater treatment such as a septic tank or aerated treatment unit (ATU). Final treatment and dispersal is through lateral trenches in the soil. In septic tank systems, most of the wastewater treatment is provided by the soil. Soil or space limitations sometimes make it necessary to use an ATU or a more advanced pretreatment system. These systems include components such as filters, pumps, electric controls, distribution valves and bio-filters. If an onsite system is properly sized, located, installed, **maintained**, and **operated**, it can adequately treat wastewater indefinitely.

It is difficult for the homeowner, buyer, or lender to know the condition of an existing onsite system, since most components are underground. For the most part, local public health agencies no longer inspect existing systems related to real estate transfer. The help of a licensed inspector/evaluator can be obtained to check the condition of the system. Individuals are licensed by the Missouri Department of Health and Senior Services to perform private assessments of existing onsite systems for real estate transactions. There are two distinct types of assessments performed by these licensed individuals: inspections and evaluations.

An **inspection** provides a thorough assessment of the condition of an onsite system and all components. In addition, a water volume test is conducted to determine whether a soil absorption system can accept normal anticipated wastewater flows. An **evaluation** reports on the general condition of the onsite system, including any signs of present or past system failure. Evaluations also report on possible soil limitations for an absorption system or lagoon. Both inspections and evaluations provide an assessment of the water supply if it is from a private source. A report showing the results of either assessment is provided to the person who requested it. Copies are also provided to Department of Health and Senior Services Onsite Sewage Program staff, and the local onsite sewage agency.

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The table below will help you determine whether you need an inspection or an evaluation. When applying for a home loan, check with the lender to determine which type of assessment is required, if any.

When you have received an onsite system inspection or evaluation report, it is important to understand what it means. An evaluation or inspection report might alert the homeowner, buyer or lender to deficiencies or potential deficiencies with the onsite system. If there are deficiencies, the parties involved in a real estate transaction must decide what system repairs will be made. State regulations do not require systems that existed prior to 1996 to comply with current standards as a result of an inspection/evaluation. However, in some cases, local standards are more stringent than the state regulation.

Comparison of Inspections and Evaluation

Description	Inspection	Evaluation
1. Can be performed by a private licensed inspector	x	x
2. Can be performed by a private licensed evaluator		x
3. Reports on the system's condition the day of the inspection or evaluation	x	x
4. Reports on evidence of system failure, current or past	x	x
5. Reports on potential soil limitations for absorption systems or lagoons, using published soil surveys		x
6. Must have access to all sewage tank components	x	
7. Checks the size and condition of tanks and system	x	
8. Checks function of all tanks, pretreatment components, mechanical components, and controls	x	
9. Provides water volume test of soil absorption systems	x	
10. May include dye test	x	
11. Provides assessment of private water supply if one is present	x	x
12. Provides report on results of assessment to homeowner, buyer or requesting party	x	x

Some deficiencies noted on an assessment report are an indication that the system has failed in the past or could potentially fail soon. Failing onsite systems can be a health hazard for the family or guests in the home and others in the neighborhood. Also, if the local authority receives a complaint about a system that is creating a nuisance, the property owner may be required to make repairs. Examples of nuisances are wastewater from an absorption system on top of the ground, or wastewater draining onto someone else's property, or into a stream or lake.

Other reported deficiencies could indicate that components of the onsite system do not meet current standards or that routine maintenance has been neglected. For some of these systems, proper maintenance and system management could extend the potential useful life of the system.

A water sample that shows bacterial contamination is reason for concern whether the contamination is from an onsite system or not. An inspector/evaluator can resample the water after the water system has been disinfected. Two good samples, at least one week apart, after chorine has been flushed from the system would show that the system is safe, but regular sampling is recommended. Additional bad samples can be further investigated with the assistance of a licensed well driller or experienced plumber.

If onsite system repair is planned, contact the local administrative authority regarding permit application requirements before any new construction or major repair. The installation must comply with current standards.

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